

**A METHOD FOR IMPROVED CHEMICAL SYNTHESIS OF GUANIDINIUM
ALKALOIDS**

ABSTRACT OF THE DISCLOSURE

Improved methods for convergent, total enantioselective synthesis of guanidinium alkaloid compounds including ones having *cis*- or *-trans*-1-oxo-and 1-iminohexahydropyrrolo [1,2-
c]pyrimidine units including, 13,14,15-isocrambescidin 800, crambescidin 800 and ptilomycalin A, for use as therapeutic agents having antifungal and/or antiviral and/or antitumor activity are provided. Methods for preparing novel pentacyclic intermediates for the preparation of the crambescidin/ptilomycalin family of guanidinium alkaloids and congeners are also disclosed.